

shown alternately in white and black, as an aid to the eye in identifying the quinquennial slices, representing the population by age in 1920 (white), 1925 (black), 1930 (white), etc. The last white slice is labeled "Infinity," and corresponds to the "ultimate" age distribution determined by the 1920 mortality (life table) and age schedule of maternity frequency.

The model clearly exhibits the following features:

1. The *increase* in the proportion of older persons from 1920 to later dates. Note the upward stepping of the blocks from left to right near the front of Figure 3.
2. The *decrease* in the proportion of younger persons. Note the "sky line" at the top. This also indicates the decreasing birthrate. This gradual ageing of the population is also clearly brought out in Table 4.
3. The gradual smoothing out of the roughnesses of the original age distribution (on left), until finally the "smooth" *ultimate* distribution is reached.
4. In the 65 years from 1920 to 1985 the "ultimate" age distribution is practically attained.

The gradual "ageing" of the population referred to under 1 and 2 above appears essentially as a continuation of a process which has actually been going on for many years past, as shown in column 3 of Table 4.

Column 2 of this table, on the other hand, shows that we may expect only comparatively little change in the proportion of the population comprised between the ages of 15 and 55, the essentially productive and reproductive period of life. There will tend to be fewer children, more "old" people (65 and over), but about the same number of persons in the middle ranges of life.

GEOLOGY.—*The restoration of Ostrea multilirata Conrad, 1857.*¹

JULIA A. GARDNER. U. S. Geological Survey.

The possibility of the identity of *Ostrea tasex* Gardner with the earlier *Ostrea multilirata*² Conrad was suggested in the original description of *O. tasex*. At that time I discussed their relationship as follows:³

Ostrea tasex is probably identical with *Ostrea multilirata* Conrad, collected from the so-called Cretaceous of "Dry Creek, Mexico." Conrad's types are in the National Museum and are fairly well preserved. Nothing of the kind has been reported from the Cretaceous by later investigators who have collected extensively in the Rio Grande area. However, *Ostrea cortex*, col-

¹ Received October 1, 1926.

² CONRAD, T. A., U. S. and Mex. Boundary Survey Rept. 1: (pt. 2) 157, pl. 12, figs. 1a-d. 1857.

³ GARDNER, JULIA, U. S. Geol. Survey Professional Paper 131: (D) 109. 1923.

lected at the same locality, is certainly a Cretaceous species, and until "Dry Creek" can be definitely located and the confusion in the stratigraphic relations cleared the Wilcox form may well be kept apart.

When I was working out from Eagle Pass in the summer of 1925, I attempted to locate "Dry Creek," obviously a translation if the *Ostrea* in question really came from the Mexican side, and a descriptive term applied to a large percentage of the arroyos of southwest Texas and the adjoining section of Mexico. Not even the oldest ranchman with his thorough familiarity with local names in years long past could give me any helpful information and I am convinced that Conrad's *Dry Creek* has no standing as a geographic term. As many of his boundary localities are rather confused, it is quite possible that his species did not come from the Mexican side at all but from the Texas. The drainage upon the Texas side contributes readily to the co-mingling of the Wilcox and Cretaceous species. In southern Maverick County, about 28 miles southwest of Eagle Pass, I found collecting conditions which may very well have been similar to those which caused Conrad's confusion. Tobar arroyo twists from Tobar tank about 2 miles north of the Windmill Ranch House to the Rio Grande, a distance of about ten miles by stream bed. It is dry during the greater part of the year but becomes a powerful torrent in the sudden heavy rains of that section of the country. The valley is consequently quite deep and the stream bed covered with coarse debris. The upper part of the course cuts the Wilcox and the heavy oyster reef near the base, tearing down the oysters and scattering them about the valley in the greatest profusion. The shells are very resistant and are often protected to a certain extent by the matrix. They continue to be abundant in the stream debris throughout the length of the Midway outcrop and near the Rio Grande, where the arroyo cuts the Cretaceous, they are commonly mingled with *Ostrea cortex*. There is no reasonable doubt, in my opinion, that Conrad collected his *Ostrea cortex* and *Ostrea multilirata* under conditions analogous to those of Tobar arroyo and, though it is most unfortunate that the type locality of Conrad's species can not be definitely located, I do not think that the resulting obscurity is sufficiently great to invalidate his species. I therefore propose that the name *Ostrea tasex* Gardner be suppressed in favor of *Ostrea multilirata* Conrad, 1857.